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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,417	01/22/2004	Toshihiko Omori	Q79515	3200
23373	7590	05/26/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			KO, TONY	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 10/761,417	Applicant(s) OMORI, TOSHIHIKO	
	Examiner Tony Ko	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/22/04</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Specification*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4, 5, 7, 8-15, and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Manni (US 2002/0196414).
4. Regarding claim Claims 1, 2, 4, 5, 7, 8-15, and 17, Manni discloses (Fig. 3) a light source (32); an optical integrator (22, 221, 222) to which light is supplied from the light source; and a two-dimensional spatial light modulator (26) illuminated by light which has transmitted the optical integrator, wherein the light source comprises an optical fiber bundle in which a plurality of optical fibers are arranged and light is emitted from the plurality of optical fibers (Paragraph [34]), and the configuration of a light-emitting area formed at an end portion of the optical fiber bundle is, as seen from the light emitting side, substantially similar to the contour configuration of the light-emitting

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surface of the optical integrator. Manni also discloses the optical integrator is a fly-eye type. Manni also discloses the two dimensional spatial light modulator is a digital micromirror (Paragraph [35]). Manni also discloses the two-dimensional spatial light modulator is disposed in a tilted manner so that a predetermined angle is formed by a direction of a side of the two-dimensional spatial light modulator and a main scanning direction for exposure (Paragraph [35]). Manni also discloses the light source portion comprises a laser diode (10). Manni also discloses the light source portion comprises a plurality of laser diodes, and each of the plurality of optical fibers is coupled to the plurality of laser diodes. Manni also discloses (Fig. 3) the light source portion comprises a plurality of laser diodes, and each of plurality of optical fibers is coupled to the plurality of laser diodes. Manni also discloses the light source portion comprises a broad area type laser diode array including a plurality of emitters (Paragraph [32]).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6, 7, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manni.

7. Regarding claims 6 and 16, Manni discloses the invention set forth above. Manni does not disclose the predetermined angle is in the range of 0.1 degree and 1 degree. It is design choice to set the predetermined angle in the range of 0.1 degree and 1 degree. It would have been obvious to a person of ordinary skill in the art at the time of the invention to set the predetermined angle in the range of 0.1 degree and 1 degree to achieve the desired spatial light coverage area.

8. Regarding claims 7 and 17, Manni discloses the invention set forth above. Manni does not disclose a diameter of at least one of a core and a clad of each of the plurality of optical fibers is changed depending on the number of the plurality of optical fibers. It is well known to have at least one of a core and a clad of each of the plurality of optical fibers is changed depending on the number of the plurality of optical fibers. It would have been obvious to a person of ordinary skill in the art at the time of the invention to have a at least one of a core and a clad of each of the plurality of optical fibers is changed depending on the number of the plurality of optical fibers to establish the desired light intensity.

9. Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manni in view of Koyama (US Patent 5949503A).

**10.** Regarding claims 3 and 10, Manni discloses the invention set forth above. Manni does not disclose the optical integrator is a rod type. Koyama discloses the use of a rod type integrator (Col. 14, Lines 55-65). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a rod type integrator to improve irradiance uniformity.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Ko whose telephone number is 571-272-1926. The examiner can normally be reached on Monday-Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TKO

  
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